CHAPTER 8

Managing Devices

After Prime Performance Manager discovers your network devices, you can view detailed information, perform management actions, and create individualized polling for discovered network devices.

Device views, the properties you can display, and the actions you can perform are described in the following topics:

Displaying Network-Level Device Information

The Prime Performance Manager network device view provides the broadest overview of your network devices. From this view you can drill down to different device details, as well as to individual devices for details about one device. (See Displaying Individual Device Information, page 8-17.)

To display the network-level device view, from the Network menu, choose **Devices**. The Network Devices window displays the last updated time in the window title bar. If the gateway and client reside in the same time zone, one time is presented. If the gateway and client are in different time zones, both times are presented.

Device information areas, accessed from Network Devices window tabs, are displayed in Table 8-1.

Table 8-1 Network-Level Device Information

Details	Description	For information, see
Devices	Lists all network devices and device properties.	Displaying Network-Level Device Properties, page 8-2
Types	Displays a device distribution by device type.	Displaying Device Type Distributions, page 8-4
Alarms by Device	Displays alarms by device.	Displaying Alarms by Device, page 8-5
Alarms by Device Type	Displays alarms by device type.	Displaying Alarms by Device Type, page 8-6

Table 8-1 Network-Level Device Information (continued)

Details	Description	For information, see
SNMP Timeouts	Displays SNMP timeout alarms.	Displaying Device SNMP Time Out Alarms, page 8-7
Poll Response	Displays poll response data.	Displaying Device Poll Responses, page 8-7
Ping Response	Displays ICMP ping response data.	Displaying Device ICMP Ping Responses and Availability, page 8-8
Uptime	Displays device up time.	Displaying Device Up Time, page 8-8
Software	Displays device software information.	Creating and Editing Device Polling Groups, page 8-22
Contact/Location	Displays device contacts and locations.	Displaying Device Contacts and Locations, page 8-9
Vendor	Displays the device manufacturer.	
Prime Style	Displays device properties in Cisco Prime format.	Displaying Device Details in Cisco Prime Format, page 8-10

Displaying Network-Level Device Properties

Prime Performance Manager displays properties for all network devices in one view. To display them:

- From the Network menu, choose **Devices**.

All discovered network devices are displayed. Table 8-2 lists the available device properties. In addition, the following items can be changed in User Preferences.

- Moving your cursor over device links displays the device details described in Table 8-2 on page 8-2, and in Table 8-10 on page 8-18. The popup is useful in other windows that list devices, for example, the Network Active Alarms window, or when drilling down to the interface report level. However, you can disable this feature in the User Preferences window.
- Devices include an alarm severity icon indicating the highest level alarm on the device. You can disable this feature in the User Preferences window.
- Deleted devices, without hyperlinks, can be displayed by enabling this option on the User Preferences window.

For information about changing user preferences, see Changing User Preferences, page 3-7

Table 8-2 Devices Properties

Property	Description
Internal ID[1]	Device internal ID. Prime Performance Manager assigns this ID to the device for internal use.
Unit[2]	Name of the unit to which the device is assigned.
Display Name	Device display name.
Sync Name	Device sync name.
Custom Name[1]	Device custom name, if available.

Table 8-2 Devices Properties (continued)

Property	Description
IP Address or DNS Hostname[1]	Device IP address or DNS name as Prime Performance Manager discovered it.
System Name[1]	Device system name.
Management IP Address	IP address used to poll the device.
Device Type	The device type, which is usually based on the device family, for example, Cisco1706 for Cisco 1706 Series Routers. If the device family type is not known, IP Device is displayed. Prime Performance Manager gateway and unit servers are listed as ciscoGatewayServer and ciscoUnitServer.
Vendor	Device manufacturer.
Software Version[1]	Device software version.
Software Description	Device software description, if available.
Last Full Poll Time	The time of the last Prime Performance Manager poll.
Last SNMP Poll Response (secs)	The time for the device to respond to the last SNMP poll requests.
Avg. SNMP Poll Response (secs)[1]	Average time for the device to respond to Prime Performance Manager SNMP poll requests.
Last CLI/XMP Poll Response (secs)	The time for the device to respond to the last CLI/XMP (for example, Telnet, SSH) poll requests.
Avg. CLI/XMP Poll Response (secs)[1]	Average time for the device to respond to Prime Performance Manager CLI/XMP poll requests.
Uptime[1]	Time the device has been up in days, hours, minutes, and seconds.
Reboot Reason[1]	Reason for the last device reboot.
Discovery Source	Indicates how Prime Performance Manager discovered the device: PPM (Prime Performance Manager) or Prime Network. See Chapter 5, "Discovering Network Devices."
Sending Alarms	Indicates whether or not the device is sending alarms. Users with authentication level Network Operator (level 3) and higher can edit this field. See Creating and Editing Device Polling Groups, page 8-22.
Report Polling	Indicates whether report polling is enabled for this device.
Severity	If alarms are raised for the device, the highest severity: Critical, Major, Minor, Warning, Informational, Indeterminate, Unmanaged, or Normal.
Last Status Change[1]	Date and time that the device status last changed.

Table 8-2 Devices Properties (continued)

Property	Description
Status[3]	Current device status: • Active—The device is active. • Discovering—Prime Performance Manager is in the process of discovering the device; not all device details are known. • Polling—Prime Performance Manager is polling the device. • Unknown—Prime Performance Manager does not have the device details, possibly because connectivity is lost or other reasons. • Unmanaged—Indicates a Prime Network device that is not managed by Prime Network. • Waiting—Prime Performance Manager has sent a polling request and is waiting for a response. • Warning—The device is in a warning status.
Status Reason	Reason for the current device status. (If you cannot see all of the status reason text, place the cursor over the cell to see the full text in a tooltip.) A list of possible reasons is provided in the stateReasons.html, located at: /opt/CSCOppm-gw/apache/share/htdocs/eventHelp.
Contact[1]	The device contact name, if added.
Location[2]	The device location, if added.
Polling Group[1]	The polling group to which the device is assigned. See Creating and Editing Device Polling Groups, page 8-22
Report Policy[1]	The report policy to which the device is assigned. See Creating Report Policies, page 7-20.

1. Not displayed by default. To display hidden properties, see Adding and Removing Properties from Property Views, page 3-13.
2. Not displayed by default for device alarms; displayed for SNMP timeout alarms.
3. Not displayed by default for SNMP timeout alarms.

Displaying Device Type Distributions

The Device Distributions page presents your device type distributions in table and pie chart format (Figure 8-1). Information includes the device type, the total number of devices, and the device type percentage within the network. To display device distributions:

- From the Network menu, choose **Devices**, then click **Types**.

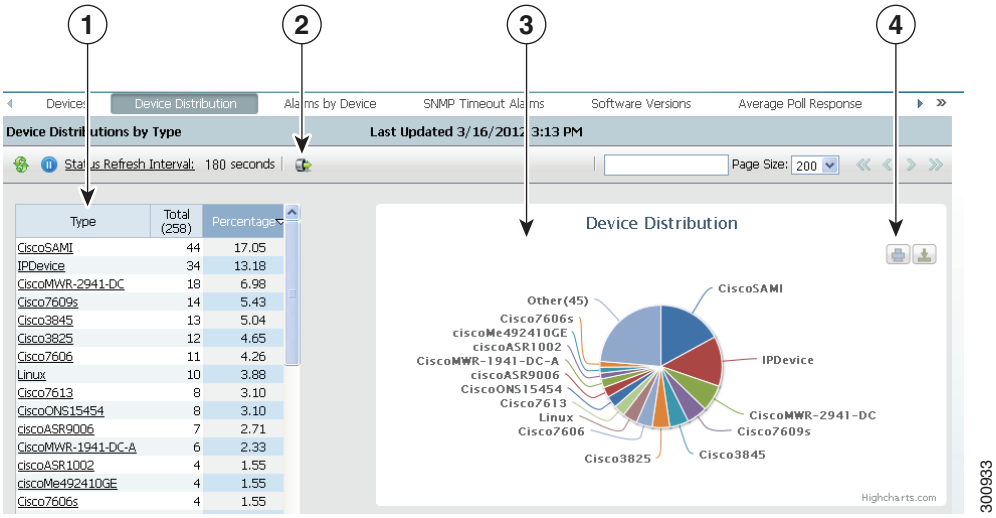
Device Distribution fields include:

- Type—The name of the device platform, for example, Cisco1706, ONS15454.
- Total (*total number of devices*)—The total number of devices of a particular type.
- Percentage—The percentage of devices of this type out of all the discovered devices.

From the Device Distributions window, you can:

- Click a device type link to display all the devices of that type. From there you can drill down into individual devices to view reports, alarms, events, and other information described in Displaying Network-Level Device Properties, page 8-2.
- Export the data to a CSV file.
- Send the distributions pie chart to a printer or graphic image.

Figure 8-1 Device Distributions



1	Device distributions in table format	**3**	Device distributions in pie chart.
2	Export to CSV file.	**4**	Send to printer and graphic image.

Displaying Alarms by Device

The Network Alarms by Device area displays a count of alarms by device and severity. You can display alarms by device from either the Devices or Alarms/Events windows:

- From the Network menu, choose either **Devices** or **Alarms/Events**, then click **Alarms by Device**.

Table 8-3 lists the Alarms by Device properties.

Table 8-3 Network Alarms by Device Properties

Column	Tool	Description
Internal ID[1]	—	Internal device ID. Prime Performance Manager assigns this ID to the device for internal use.
Device	—	Name of the device. When you click any of the device names, the Alarms tab of that device is displayed. This column is displayed by default.

Table 8-3 Network Alarms by Device Properties (continued)

Column	Tool	Description
Sending Alarms	—	Indicates whether or not the device is sending alarms. Users with authentication level Network Operator (level 3) and higher can edit this field. See Creating and Editing Device Polling Groups, page 8-22.
Last Status Change[1]	—	Date and time that the status of the device alarms last changed.
Total	—	Total number of alarms for the device.
Critical (*alarm count*) (*alarm percentage*)		Total number of critical alarms for the device.
Major (*alarm count*) (*alarm percentage*)		Total number of major alarms for the device.
Minor (*alarm count*) (*alarm percentage*)		Total number of minor alarms for the device.
Warning (*alarm count*) (*alarm percentage*)		Total number of warning alarms for the device.
Informational (a*larm count*) (*alarm percentage*)		Total number of informational alarms for the device.
Indeterminate (*alarm count*) (*alarm percentage*)		Total number of indeterminate alarms for the device.
Normal (*alarm count*) (*alarm percentage*)		Total number of normal alarms for the device.

1. Not displayed by default. To display hidden properties, see Adding and Removing Properties from Property Views, page 3-13.

Displaying Alarms by Device Type

The Network Alarms by Device Type area displays device alarm information organized by device types. You can display alarms by device type from either the Devices or Alarms/Events windows:

- From the Network menu, choose either **Devices** or **Alarms/Events**, then click **Alarms by Device Type**.

Network Alarms by Device Type displays the following information:

- Device Type—The device type, for example, Cisco7606 for Cisco 7606 Routers, CiscoONS15454 for Cisco ONS 15454 Multiservice Transport Platform, and so on.
- Total—The total number of alarms for the device type.
- Alarms—The following alarm totals are provided along with the total alarm count and alarm percentage:
  - Critical
  - Major
  - Minor
  - Warning
  - Information

- Indeterminate
- Normal

Displaying Device SNMP Time Out Alarms

The SNMP Timeout Alarms link displays the devices for which a Node Unreachable alarm is present. To display SNMP timeout alarms:

- From the Network menu, choose **Devices**, then click **SNMP Timeout**. The table displays the same device parameters as the Devices table. See Table 8-2 on page 8-2.

Displaying Device Poll Responses

The Poll Response table displays the number of seconds devices take to respond to the Prime Performance Manager poll requests. To display the device poll responses:

- From the Network menu, choose **Devices**, then click **Poll Response**.

Table 8-4 lists the Poll Response information.

Table 8-4 Device Average Poll Responses

Column	Description
Internal ID[1]	Internal device ID. Prime Performance Manager assigns this ID to the device for internal use.
Unit[1]	Name of the unit to which the device is assigned.
Display Name	Name of the device.
Primary SNMP Address	IP address of the device, which SNMP uses to poll the device.
Device Type	The device type, which is usually based on the device family, for example, Cisco1706 for Cisco 1706 Series Routers. If the device family type is not known, IP Device is displayed. Prime Performance Manager gateway and unit servers are listed as ciscoGatewayServer and ciscoUnitServer.
Location	The device location.
Report Polling	Indicates whether or not report polling is enabled for this device.
Last Full Poll Time	The date and time Prime Performance Manager last polled the device.
Last Poll Response	The time, in seconds, it took for the device to respond to the poll.
Avg. Poll Response (secs)	Average response time for the device to respond to poll from the Prime Performance Manager server.
Severity	The highest severity alarm currently raised on the device.

1. Not displayed by default. To display hidden properties, see Adding and Removing Properties from Property Views, page 3-13.

Displaying Device ICMP Ping Responses and Availability

The ICMP Ping Response and Device Availability table displays the number of seconds devices take to respond to the Prime Performance Manager Internet Control Message Protocol (ICMP) pings, and the resulting device availability percentages. To display ICMP ping results and device availability:

- From the Network menu, choose **Devices**, then click **Ping Response**.

The following information is displayed:

- Last ICMP Response—The time required for the device to respond to the last ICMP ping.
- Availability—Based upon the ping responses, the device availability is provided for the previous and current time periods for the following intervals:
  - 15 Minutes
  - Hourly
  - Daily
  - Weekly
  - Monthly

Displaying Device Up Time

The Uptime link displays the uptime for managed devices. To display device uptimes:

- From the Network menu, choose **Devices**, then click **Uptime**.

Table 8-5 lists the device up time properties.

Table 8-5 Device Up Time

Column	Description
Internal ID[1]	Internal device ID. Prime Performance Manager assigns this ID to the device for internal use.
Unit[1]	Name of the unit to which the device is assigned.
Display Name	The device display name.
Device Type	The device type, which is usually based on the device family, for example, Cisco1706 for Cisco 1706 Series Routers. If the device family type is not known, IP Device is displayed. Prime Performance Manager gateway and unit servers are listed as ciscoGatewayServer and ciscoUnitServer.
Uptime	Time the device has been up, in days, hours, minutes, and seconds.
Reboot Reason	Reason for the last reboot of the device.
Severity	Indicates the highest alarm severity for the chosen device: Critical, Major, Minor, Warning, Informational, Indeterminate, Unmanaged, or Normal.

1. Not displayed by default. To display hidden properties, see Adding and Removing Properties from Property Views, page 3-13.

Displaying Device Software

The Network Software table lists the software versions and descriptions for each device in the Prime Performance Manager network. To display the device software information,

- From the Network menu, choose **Devices**, then click **Software**.

Table 8-6 lists the Software parameters.

Table 8-6 Software

Column	Description
Display Name	Name of the device.
Device Type	The device type, which is usually based on the device family, for example, Cisco1706 for Cisco 1706 Series Routers. If the device family type is not known, IP Device is displayed. Prime Performance Manager gateway and unit servers are listed as ciscoGatewayServer and ciscoUnitServer.
Software Version	Software version used by the device.
Software Description	Full software version information.

Displaying Device Contacts and Locations

The Contacts/Locations link displays the device contacts and locations if that information was entered for the device. To display the device contacts and locations:

- From the Network menu, choose **Devices**, then click **Contacts/Locations**.

Table 8-7 lists the Contact and Location properties.

Table 8-7 Device Contacts and Locations

Column	Description
Internal ID[1]	Internal device ID. Prime Performance Manager assigns this ID to the device for internal use.
Display Name	The device display name.
IP Address or DNS Hostname[1]	IP address or DNS name of the device, as the Prime Performance Manager discovered it.
SysName[1]	System name of the device.
Primary SNMP Address[1]	The IP address that SNMP uses to poll the device.
Device Type	The device type, which is usually based on the device family, for example, Cisco1706 for Cisco 1706 Series Routers. If the device family type is not known, IP Device is displayed. Prime Performance Manager gateway and unit servers are listed as ciscoGatewayServer and ciscoUnitServer.
Contact	The device contact name.
Location	The device location.

1. Not displayed by default. To display hidden properties, see Adding and Removing Properties from Property Views, page 3-13.

Displaying Device Vendors

The Vendors link displays the device types, manufacturers, and status. To display the device vendor information:

- From the Network menu, choose **Devices**, then click **Vendor**.

Table 8-8 displays the device vendor information.

Table 8-8 Device Vendor Information

Column	Description
Internal ID[1]	Internal device ID. Prime Performance Manager assigns this ID to the device for internal use.
Display Name	The device display name.
IP Address or DNS Hostname[1]	IP address or DNS name of the device, as the Prime Performance Manager discovered it.
System Name[1]	System name of the device.
Management IP Address[1]	The IP address that SNMP uses to poll the device.
Device Type	The device type, which is usually based on the device family, for example, Cisco1706 for Cisco 1706 Series Routers. If the device family type is not known, IP Device is displayed. Prime Performance Manager gateway and unit servers are listed as ciscoGatewayServer and ciscoUnitServer.
Vendor	The device manufacturer.
Status	The device status, for example, Active.

1. Not displayed by default. To display hidden properties, see Adding and Removing Properties from Property Views, page 3-13.

Displaying Device Details in Cisco Prime Format

If Prime Performance Manager is integrated with Cisco Prime Central (see "Prime Central Integration"), you can display the device details in a format that matches Prime Central. Because fewer properties are displayed than the Devices tab, Prime Style can provide a quick look at the Prime Performance Manager devices in an organization that aligns with their display in Prime Central.

To display Prime Performance Manager device details in Prime Central format:

- From the Network menu, choose **Devices**, then click **Prime Style**.

Table 8-7 lists the device properties displayed in the Prime Style tab.

Table 8-9 Device Details in Prime Style

Column	Description
Internal ID[1]	Internal device ID. Prime Performance Manager assigns this ID to the device for internal use.
Unit[1]	The unit to which the device is assigned.
Device Name	IP address or DNS name of the device, as the Prime Performance Manager discovered it.

Table 8-9 Device Details in Prime Style (continued)

Column	Description
Device Type	The device type, which is usually based on the device family, for example, Cisco1706 for Cisco 1706 Series Routers. If the device family type is not known, IP Device is displayed. Prime Performance Manager gateway and unit servers are listed as ciscoGatewayServer and ciscoUnitServer.
Status	Current device status: • Active—The device is active. • Discovering—Prime Performance Manager is in the process of discovering the device; not all device details are known. • Polling—Prime Performance Manager is polling the device. • Unknown—Prime Performance Manager does not have the device details, possibly because connectivity is lost or other reasons. • Unmanaged—Indicates a Prime Network device that is not managed by Prime Network. • Waiting—Prime Performance Manager has sent a polling request and is waiting for a response. • Warning-—The device is in a warning status.
Management IP Address	IP address used to poll the device.
Software Version	The software version installed on the device.
System Name	The device system name.

1. Not displayed by default. To display hidden properties, see Adding and Removing Properties from Property Views, page 3-13.

Managing Devices in the Network-Level View

At the network-level device view, operator or higher users can perform some device modifications. To manage network devices:

Step 1 From the Network menu, choose Devices.

Step 2 Navigate to one of the following device view tabs:

- Devices
- Alarms by Device
- SNMP Timeouts
- Poll Response
- Ping Response
- Uptime
- Software
- Contact/Locations
- Vendor

- Prime Style

See Displaying Network-Level Device Information, page 8-1 for information on displaying these views.

Step 3 Select a device. Press **Shift** to select multiple contiguous devices, or **Ctrl** to select devices that are not contiguous.

Step 4 From the Actions menu (located just above the device table), choose any of the following actions.

- Poll Device—Polls the devices selected in the device list.
- Edit Properties—Allows you to edit the device display name and default web port. See Editing a Device Name, Web Port, and Time Zone, page 8-13.
- Edit Device Credentials—Allows you to edit the device SNMP or Telnet/SSH credentials used to poll the device. See Editing the Device Credentials, page 8-13.
- Edit Report Policy—Allows you to change the report policy assigned to the device. See Editing the Report Policy Assigned to a Device, page 8-15
- Edit Polling Policy—Allows you to change the polling policy assigned to the device. See Creating and Editing Device Polling Groups, page 8-22 and Editing the Polling Group Assigned to a Device, page 8-15.
- Edit SNMP IP Addresses—Allows you to edit a device SNMP IP addresses. See Editing the Device SNMP IP Addresses, page 8-16.
- Relocate Device—Allows you to relocate a device from one unit to another. See Relocating Devices to Units, page 8-16.
- Disable Sending Alarms—Disables sending alarms from the selected device.
- Enable Sending Alarms—Enables sending alarms from the selected device.
- Unmanage Device—Changes managed devices to unmanaged.
- Manage Device—Changes unmanaged devices to managed.
- Delete—Deletes the selected device(s).

Note If multiple devices are selected, not all actions are available.

Step 5 To check device connectivity, from the device toolbar, click one or both of the following:

- Ping—Pings the device and displays the results in a Ping Device: [*device name*] window.
- Traceroute—Runs the traceroute command to detail the route from the gateway to the device and displays the results in a Traceroute Device: [*device name*] window.

Note You can also use the ppm ping and ppm traceroute commands to check device connectivity. See ppm ping, page B-47 and ppm traceroute, page B-77.

Editing a Device Name, Web Port, and Time Zone

Within the device network view, you can change the device name, web port, or time zone. To edit these device properties:

Step 1 Navigate to one of the following device views: Devices, Device Distribution, SNMP Timeout Alarms, Software, Average Poll Response, Uptime, Contact/Locations. (For information on displaying these views, see Displaying Network-Level Device Information, page 8-1.)

Step 2 In the device list, select the device whose name you want to edit.

Step 3 From the Actions menu, choose **Edit Properties**

Step 4 In the Edit Properties dialog box, edit the following properties:

- Name—Name of the device. The name is green for valid inputs and red for invalid inputs. The name may include up to 100 alphanumeric and the special characters hyphen (-), underscore (_), period (.), and colon (:). If you enter an invalid name, the Save option is disabled. After saving, the new name is displayed in the navigation tree and in the Details panel. The character '.' is allowed only when the resulting name is a valid hostname.
- Default Web Port—Should you wish to change the default device web port, enter the web port number.
- Time Zone—Should you wish to change the device time zone, enter the time zone by typing the first letters. The field will populate with time zones matching the letters you entered.

Note For device alarms and events to be displayed in the device time zone,

Step 5 Click **Save**.

Editing the Device Credentials

To edit the device SNMP or Telnet/SSH credentials:

Step 1 Navigate to one of the following device views: Devices, Device Distribution, SNMP Timeout Alarms, Software, Average Poll Response, Uptime, Contact/Locations. (For information on displaying these views, see Displaying Network-Level Device Information, page 8-1.)

Step 2 In the device list, select the device whose credentials you want to edit.

Step 3 From the Actions menu, choose **Edit Device Credentials**.

Step 4 In the Edit Device Credentials dialog box, edit any of the following:

SNMP v1, v2

- Read Community—The SNMP community name used by the device for read access to the information maintained by the SNMP agent on the device.

SNMP v3

- User Name—The user name.
- Authentication Protocol—The authentication protocol:

- md5—Uses the Hash-based Message Authentication Code (HMAC) MD5 algorithm for authentication
- sha—Uses the HMAC SHA algorithm for authentication
- Authentication Password—The authentication password (SNMP v3),
- Privacy Protocol—The privacy protocol:
- 3des—Uses Data Encryption Standard (DES).
- des—Uses the Data Encryption Standard (DES).
- aes128—Uses Advanced Encryption Standard (AES) 128-bit encryption.
- Privacy Password—The privacy password.

Telnet/SSH

- User Name—The device login username.
- Password—The password for the login user.
- Enable User Name—The privileged username.
- Enable Password—The privileged user password.
- Protocol—Choose the transport protocol to be used to communicate with device:
  - Telnet—Telnet
  - SSHv1—SSH Version 1
  - SSHv2—SSH Version 2
  - WSMA_SSH—Web Services Management Agent over SSHv2. WSMA is an infrastructure framework that allows external applications to monitor and control Cisco devices. WSMA uses transports such as SSH, HTTP, and HTTPS to access a set of Web Services agents residing on the Cisco device.
  - vCenter_HTTPs
  - vCenter_HTTP
  - ESXi_HTTPs
  - ESXi_HTTP
  - XEN_TLS
  - KVM_TLS
  - HyperV_HTTPs
  - HyperV_HTTP
- Port—The device port to be used by the transport protocol chosen in the Protocol field.
- Sub System—The subsystem used by transport protocol. If the subsystem is defined on the device, enter it here. A blank string is the default subsystem for SSH. The default subsystem for WSMA is “wsma”.

Step 5 Click **Save**.

The edited credentials are saved for the device.

Editing the Report Policy Assigned to a Device

To edit the report policy assigned to a device:

Step 1 Navigate to one of the following device views: Devices, Device Distribution, SNMP Timeout Alarms, Software, Average Poll Response, Uptime, Contact/Locations. (For information on displaying these views, see Displaying Network-Level Device Information, page 8-1.)

Step 2 In the device list, select the device whose report policy you want to edit.

Step 3 From the Actions menu, choose **Edit Report Policy**.

Step 4 In the Edit Report Policy dialog box, choose the report policy that you want assigned to the device from the Report Policy policy list.

Step 5 Click **Save**.

Editing the Polling Group Assigned to a Device

To edit the polling group assigned to a device:

Step 1 Navigate to one of the following device views: Devices, Device Distribution, SNMP Timeout Alarms, Software, Average Poll Response, Uptime, Contact/Locations. (For information on displaying these views, see Displaying Network-Level Device Information, page 8-1.)

Step 2 In the device list, select the device whose polling group you want to edit.

Step 3 From the Actions menu, choose **Edit Polling Group**.

Step 4 In the Polling Group Details dialog box, edit the following properties:

- Polling Policy—Allows you to assign a different polling policy to the device. For information about creating and editing polling policies, see Creating and Editing Device Polling Groups, page 8-22
- Polling Interval—The polling interval configured in the polling policy. If you choose This Device Only, the field is editable.
- Polling Interval—The polling interval in minutes configured in the polling policy. Polling Interval is not editable unless you choose This Device Only in the Polling Policy field.
- Timeout—The timeout duration in seconds configured in the polling policy. Timeout is not editable unless you choose This Device Only in the Polling Policy field.
- Retries—The number of times Prime Performance Manager will retry a connection after a timeout configured in the polling policy. Retries is not editable unless you choose This Device Only in the Polling Policy field.

Step 5 Click **Save**.

Editing the Device SNMP IP Addresses

To edit the polling group assigned to a device:

Note The Edit SNMP IP Addresses option is available only for the users with authentication Level 5.

Step 1 Navigate to one of the following device views: Devices, Device Distribution, SNMP Timeout Alarms, Software, Average Poll Response, Uptime, Contact/Locations. (For information on displaying these views, see Displaying Network-Level Device Information, page 8-1.)

Step 2 In the device list, select the device whose SNMP addresses you want to edit.

Step 3 From the Actions menu, choose **Edit SNMP Addresses**.

The Edit SNMP IP Address dialog box displays the following:

- Available IP Addresses—Lists all IP addresses not associated with SNMP for polling.
- IP Addresses for SNMP—Lists the IP addresses associated with the device, including the primary SNMP address and all backup IP addresses, that are intended for SNMP.

Step 4 Click any of the following:

- **Add**—Adds the IP Addresses from the Available IP Address box to the IP Addresses for SNMP box. This option is disabled if there is no IP address in the Available IP Address box.
- **Remove**—Removes the IP Addresses from the IP Addresses for SNMP box and adds them to the Available IP Addresses box. This option is disabled if there is no IP address in the IP Addresses for SNMP box.
- **Raise**—Moves the selected IP address up one level in the IP Addresses for SNMP box. This option is disabled if there is only one IP address in the IP Addresses for SNMP box.
- **Lower**—Moves the selected IP address down one level in the IP Addresses for SNMP box. This option is disabled if there is only one IP address in the IP Addresses for SNMP box.

Step 5 When finished, click **Save**.

Relocating Devices to Units

To relocate a device to a different unit:

Step 1 Navigate to one of the following device views: Devices, Device Distribution, SNMP Timeout Alarms, Software, Average Poll Response, Uptime, Contact/Locations. (For information on displaying these views, see Displaying Network-Level Device Information, page 8-1.)

Step 2 In the device list, select the device that you want to relocate.

Step 3 From the Actions menu, choose **Relocate Device**.

Step 4 In the Relocate Device dialog box, choose the unit to which you want to assign the device from the Units list.

Step 5 Click **Save**.

Displaying Individual Device Information

Prime Performance Manager allows you to drill down to individual devices and review additional parameters and details not displayed at the network level. including device-level reports, dashboards, properties, event history, active alarms, status, and availability.

Device time stamps can be displayed in the device time zone by enabling the Display Device Level Data in Device Time Zone option in User Preferences. Time stamps affected by this option include the time stamp displayed in report titles, calendar popup selections, summary table maximum date strings, graph date strings, tooltip hover information,.the Timestamp column in report table format, and the Timestamp values in exported CSV files. For information about changing user preferences, see Changing User Preferences, page 3-7.

To display individual device information:

Step 1 Navigate to one of the following:

- Performance menu > Reports > Choose a report. > Click a device link in the report.
- Network menu > Devices
- Network menu > Alarms/Events
- System menu > Gateways/Units
- If you attached devices to custom report views, display the view or subview. (For information about custom report views, see Creating and Managing Custom Report Views, page 7-34.)

Step 2 Click a device link or, if you are displaying a custom view, display the view or subview containing the device.

At the individual device view, the following is displayed:

Note In addition to the menus listed below, custom report views and subviews with attached devices will display a View and View Editor menus. For information, see Creating and Managing Custom Report Views, page 7-34.

- Reports—Allows you display any report that is generated for the device. The reports that are available depend upon the device hardware and network provisioning. In many cases, you can drill down to detailed device component reports, for example, interfaces and ports. For additional information about the Prime Performance Manager reports, see Chapter 7, “Managing Reports, Dashboards, and Views.”
- Dashboards—Allows you display any dashboard that can be generated for the device based upon the hardware and technologies that are provisioned for it. Like reports, you can often drill down to view device component dashboards. For additional information about the Prime Performance Manager reports, see Managing Dashboards, page 7-31.
- Details—Displays the detailed device information listed in Table 8-10.

Table 8-10 Device Details

Section	Field	Description
Toolbar	Actions menu	Allows you to modify device parameters. See Managing an Individual Device, page 8-21
	Ping	Pings the selected device.
	Traceroute	Runs a traceroute to the selected.
	Launch	Launches the device home page.
Naming Information	Display Name	The device display name.
	Custom Name	The custom device name, if one is defined. If not, this field displays Unknown.
	Sync Name	If devices were imported from Prime Network, the device name (or business tag, if defined) as it appears in Prime Network.
	IP Address or Host Name	The device IP address or DNS name, as discovered by Prime Performance Manager.
	System Name	The name set on the router and returned, using the SNMP variable sysName.
	Unit	The name of the unit to which the device belongs.
	Homepage	Provides a link to the device home page.
Status Information	Sending Alarms	Indicates whether the device is sending alarms, Yes or No.
	Alarm Severity	Indicates the alarm severity of the object.
	Status	Current device status: • Active—The device is active. • Discovering—Prime Performance Manager is in the process of discovering the device; not all device details are known. • Polling—Prime Performance Manager is polling the device. • Unknown—Prime Performance Manager does not have the device details, possibly because connectivity is lost or other reasons. • Unmanaged—Indicates a Prime Network device that is not managed by Prime Network. • Waiting—Prime Performance Manager has sent a polling request and is waiting for a response. • Warning—The device is in a warning status.
	Last Status Change	Date and time when the device status was last changed.
	Status Reason	Reason for the current device status. (If you cannot see all of the status reason text, place the cursor over the cell to see the full text in a tooltip.) A list of possible reasons is provided in the stateReasons.html, located at: /opt/CSCOppm-gw/apache/share/htdocs/eventHelp.

Table 8-10 Device Details (continued)

Section	Field	Description
Device Performance	Memory Utilization	Displays the memory utilization at the time of the poll. If the device has multiple memory pools, the utilization is the average of the pools. Text color is based on the Enabled Colors user preference: • Off—Text is not color coded. • On—Text follows the ascending metric. • Red/Orange/Gold Only—follows the ascending metric, with the exception of green. For information about user preferences, see Changing User Preferences, page 3-7.
	CPU Utilization	Displays the memory utilization at the time of the poll. If the device has multiple CPUs, the utilization is the average of the CPUs. Text color is also based on the Enabled Colors user preference.
Descriptive Information	Contact	The contact person for the managed device and contact information, if available. If the contact details are not available, this field displays Unknown.
	Software Version	The software version (for example, the ONS package or IOS version) that is installed on the device.
	Software Description	Comprehensive information about the software that is installed on the device.
	Device Type	The device type, which is usually based on the device family, for example, Cisco1706 for Cisco 1706 Series Routers. If the device family type is not known, IP Device is displayed. Prime Performance Manager gateway and unit servers are listed as ciscoGatewayServer and ciscoUnitServer.
	Location	The device physical location. If the device location details are not available, this field displays Unknown.
Uptime Information	Uptime	The time the device has been up, in days, hours, minutes, and seconds.
	Reboot Time	The date and time of the last device reboot.
	Reboot Reason	The reason for the last reboot of the device.

- Data Collection—Displays the data collection information for the device shown in Table 8-11.

Table 8-11 Data Collection

Section	Field	Description
Polling Information	Report Polling	Indicates whether report polling is enabled for this device.
	First Discovered	The date and time when Prime Performance Manager first discovered the device.
	Last Poll IP Address	The last IP address that was polled for this device.
	Last Capability Full Poll Time	The last time the device capabilities were assessed. This query is performed once every 24 hours at a minimum. It also occurs when Prime Performance Manager detects a device configuration or entity change, or when the SystemCapabilities or UserCapabilities file changes.
	Last Full Poll Time	The date and time of the last full poll of the device for device-related MIBs.
	Last SNMP Poll Response (secs)	The time, in seconds, taken by this device to respond to the last SNMP poll request.
	Avg SNMP Poll Response (secs)	The average time, in seconds, taken by this device to respond to SNMP poll requests.
	Last CLI/XML Poll Response (secs)	The time, in seconds, taken by this device to respond to the last CLI (for example, Telnet) or XML (for example, HTTP) poll request.
	Avg CLI/XML Poll Response (secs)	The average time, in seconds, taken by this device to respond to a CLI or XML poll request.
	Polling Group	The polling group to which the device is assigned. For information about polling groups, see Creating and Editing Device Polling Groups, page 8-22.
	Report Policy	The report policy assigned to the device. If no report policy is assigned, the field will display “This device only.” For information about report policies, see Creating Report Policies, page 7-20.
Collector Status	IP	Indicates whether IP connectivity is achieved. This will be Active unless the device was never successfully pinged.
	SNMP	Indicates whether data has been retrieved through SNMP. Will be Active unless data has never been retrieved using SNMP.
	CLI	Indicates whether an XML poll was performed: • Active—A successful XML poll has occurred. • Not Configured—An XML poll was never performed. • Not Active—An XML poll failed because of credentials.

Table 8-11 Data Collection (continued)

Section	Field	Description
	CSV Bulk Stats	Indicates whether CSV bulk stats were collected. This will be Not Configured for any device other than the Cisco ASR 5000. For the Cisco ASR 5000, the field will display: • Not Configured—If no CSV poll was conducted. • Active—If a successful CSV poll occurred and bulk stats results were available. • Not Active—If a successful CSV poll occurred but no bulk stats were available.
IP Addresses for SNMP	IP Address	IP addresses associated with this device, including the primary SNMP address and all backup IP addresses that are intended for SNMP.
	Last Regular Poll Time	The date and time of the last full poll of the device. If the IP address has never been polled, Prime Performance Manager displays Never Polled.
	SNMP Pollable	Indicates whether the IP address is used for SNMP polling, Yes or No.

- Event History—Displays events that have occurred on the device. For a list of event parameters, see Table 9-1 on page 9-2.
- Active Alarms—Displays alarms that have been raised on the device. For a list of event parameters, see Table 9-1 on page 9-2.
- Report Status—Displays the reports available for the device.
- Availability—Displays device availability data in table and bar chart format. Availability increments include current and last 15-minute, hourly, daily, weekly, and monthly time periods.
- Star Graphs—Allows you to add selected charts from multiple device reports and effectively create a custom report view for a specific device. For information, see Creating Custom Device Star Graphs, page 7-12.
- Device Status—Displays information from the Details, Data Collection, Event History, Active Alarms, and Availability tabs in a snapshot device status view.

Note When you select an individual device, it is added to the Devices navigation list so you can go back to it at any later point during the session. For example, if you select five devices, Device 1, Device 2, Device, 3, Device 4, and Device 5, these devices will appear in the navigation area so you can display them at any point.

Managing an Individual Device

When you drill down to an individual device, you can perform the management actions that you can perform from the device summary window.

To manage an individual device:

Step 1 Navigate to one of the following:

- Performance menu > Reports > Choose a report. > Click a device link in the report.
- Network menu > Devices
- Network menu > Alarms/Events
- System menu > Gateways/Units
- If you attached devices to custom report views, display the view or subview. (For information about custom report views, see Creating and Managing Custom Report Views, page 7-34.)

Step 2 Click a device link or, if you are displaying a custom view, display the view or subview containing the device.

Step 3 Click the **Details** tab.

Step 4 From the Actions menu, choose any of the following options:

- Poll Device—Polls the devices selected in the device list.
- Edit Properties—Allows you to edit the device display name and default web port. See Editing a Device Name, Web Port, and Time Zone, page 8-13.
- Edit Report Policy—Allows you to change the report policy assigned to the device. See Editing the Report Policy Assigned to a Device, page 8-15
- Edit Polling Policy—Allows you to change the polling policy assigned to the device. See Creating and Editing Device Polling Groups, page 8-22 and Editing the Polling Group Assigned to a Device, page 8-15.
- Edit SNMP IP Addresses—Allows you to edit a device SNMP IP addresses. See Editing the Device SNMP IP Addresses, page 8-16.
- Relocate Device—Allows you to relocate a device from one unit to another. See Relocating Devices to Units, page 8-16.
- Disable/Enable Sending Alarms—Disables or enables sending alarms from the selected device. The menu item displayed is based on the current device state.
- Manage/Unmanage Device—Changes managed devices to unmanaged, and unmanaged devices to managed. The menu item displayed is based on the current device state.
- Delete—Deletes the selected device(s).

Creating and Editing Device Polling Groups

Device polling is the frequency at which Prime Performance Manager retrieves updated information from devices. When you complete device discovery (see Chapter 5, “Discovering Network Devices”), Prime Performance Manager assigns devices to polling groups based on the device type. For example, all discovered Cisco 7606 Series Routers are assigned to a Cisco7606s polling group, all Cisco MWR 1941-DC Mobile Wireless Routers are placed in a CiscoMWR-1941-DC polling group, and so on. The number of polling groups created during device discovery depend on the number of unique device types Prime Performance Manager discovers. If all devices belong to the same device type, then only one polling group is created.

Polling groups are defined by the attributes listed in Table 8-12. All polling groups created during device discovery are assigned the default values. However, you can:

- Change the polling based on the device type. For example, to change the polling for all Cisco 7606 routers, you would modify the Cisco7606s polling group.
- Create a new polling group and assign devices to it. For example, if you want to assign the same polling parameters to a group of devices with different device types, you create the polling group and assign each device to it.

Table 8-12 Polling Group Parameters

Parameter	Default	Description
Poll Interval	15 minutes	The interval of time at which Prime Performance Manager polls the device.
Time Out	30 seconds	If Prime Performance Manager cannot connect to the device initially, the amount of time it will continue to try to connect before it times out.
Retries	2	If Prime Performance Manager cannot connect to the device, the number of times it will retry the connection after the time out interval is reached.

Editing Polling Group Parameters

Complete the following steps to edit the parameters of an existing polling group:

Step 1 Log into the Prime Performance Manager GUI as the administrator user.

Step 2 From the Network menu, choose **Polling Groups**.

Step 3 Scroll to the polling group you want to modify and edit the values in the following table cells:

- Poll Interval
- Time Out
- Retries

See Table 8-12 on page 8-23, for polling group parameter descriptions and default values.

Note You cannot edit the polling group name.

Step 4 On the Polling Group toolbar, click the **Save Polling Group** tool.

Creating a New Polling Group

Complete the following steps to create a new polling group:

Step 1 Log into the Prime Performance Manager GUI as the administrator user.

Step 2 From the Network menu, choose **Polling Groups**.

Step 3 On the Polling Group Editor toolbar, click the **Add Polling Group** tool.

Step 4 Scroll to the polling group you want to modify and edit the values in the following table cells:

- Poll Interval
- Time Out
- Retries

See Table 8-12 on page 8-23, for polling group parameter descriptions and default values.

Note You cannot edit the polling group name.

Step 5 On the Polling Group Editor toolbar, click the **Save Polling Group** tool.

Assigning Devices to Polling Groups

By default, Prime Performance Manager creates device type polling groups and assigns devices to them based on their device type. You can create custom polling groups and reassign the devices to them. To assign a device to a custom polling group:

Step 1 Log into the Prime Performance Manager GUI as the administrator user.

Step 2 From the Network menu, choose **Devices**.

Step 3 In the device table, select the row of the device whose polling group you want to change. To select more than one device, press **Shift** and highlight the device table row.

Step 4 From the Devices window toolbar Actions menu, choose **Edit Polling Group**.

Step 5 In the Edit Polling Group dialog box, choose the polling group you want to assign. The following options appear:

- The device type polling group. This option is not displayed if you choose multiple devices with different device types.
- This Device Only—If selected, allows you to edit the polling group parameters and assign it to the selected devices.
- Default—Assigns the device(s) to the default polling group.
- Custom groups—If you created polling groups, they are displayed.

Step 6 Click **OK**.